

U.S. Patent Application No. 09/880,689
Amendment dated June 30, 2004
Reply to Office Action of March 30, 2004

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (cancelled)

Claim 2 (previously presented): The toner particles of claim 31, wherein said surface treatment agent comprises silica.

Claim 3 (cancelled)

Claim 4 (currently amended): The toner particles of claim ~~31~~ 30, wherein said surface treatment agent comprises silica.

Claim 5 (previously presented): The toner particles of claim 31, wherein said toner resin is a cross-linked styrene acrylate copolymer.

Claim 6 (currently amended): The toner particles of claim 31, wherein said ~~at least one~~ charge control agent ~~comprises~~ is an organo iron complex charge agent.

Claim 7 (previously presented): The toner particles of claim 31, wherein said release agent is present and comprises a polyethylene wax.

Claim 8 (cancelled)

Claim 9 (previously presented): The toner particles of claim 32, wherein said toner resin is prepared by a limited coalescence reaction.

Claim 10 (previously presented): The toner particles of claim 31, wherein said toner resin is prepared by a limited coalescence reaction.

Claim 11 (currently amended): The toner particles of claim 31, wherein said toner resin comprises a cross-linked styrene acrylate copolymer, said charge control agent ~~comprises~~ is an organo iron complex charge agent, said surface treatment agent comprises silica, said toner resin is

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prepared by a limited coalescence reaction, and said release agent is present and comprises a polyethylene wax.

Claim 12 (cancelled)

Claim 13 (currently amended): The toner particles of claim 33, wherein said toner resin is prepared by a limited coalescence reaction, and said release agent is present and comprises from about 0.1 wt% to about 10 wt% of polyethylene wax based on the weight of the toner particles.

Claim 14 (currently amended): The toner particles of claim 31, wherein said toner resin comprises about 90 wt% cross-linked styrene acrylate copolymer, said charge control agent comprises about 1.8 wt% of organo iron complex charge agent, said surface treatment agent comprises from about 0.2 to about 0.6 wt% of silica, and said colloidal silica particles are present from about 0.2 wt% to about 0.3 wt% silica, based on the weight of the toner particles.

Claim 15 (currently amended): The toner particles of claim 14, wherein said toner resin is prepared by a limited coalescence reaction, and said release agent is present and comprises about 1.8 wt% of polyethylene wax based on the weight of the toner particles.

Claim 16 (previously presented): A developer comprising the toner particles of claim 2 and magnetic carrier particles.

Claim 17 (previously presented): A developer comprising the toner particles of claim 4 and magnetic carrier particles.

Claim 18 (original): A developer comprising the toner particles of claim 9 and magnetic carrier particles.

Claim 19 (original): A developer comprising the toner particles of claim 10 and magnetic carrier particles.

Claim 20 (original): A developer comprising the toner particles of claim 11 and magnetic

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carrier particles.

Claim 21 (cancelled)

Claim 22 (original): A developer comprising the toner particles of claim 13 and magnetic carrier particles.

Claim 23 (original): A developer comprising the toner particles of claim 14 and magnetic carrier particles.

Claim 24 (original): A developer comprising the toner particles of claim 15 and magnetic carrier particles.

Claim 25 (previously presented): The developer of claim 41, wherein said magnetic carrier particles comprise ferrite particles.

Claim 26 (previously presented): The developer of claim 41, wherein said magnetic carrier particles comprise strontium ferrite particles.

Claim 27 (previously presented): The developer of claim 41, wherein said magnetic carrier particles comprise strontium ferrite particles coated with a polymeric coating.

Claim 28 (original): The developer of claim 27, wherein said polymeric coating comprises a blend of polyvinylidene/polymethylmethacrylate polymer.

Claim 29 (original): The developer of claim 28, wherein said blend is present in a blend weight ratio of from 80/20 wt % blend of polyvinylidene/ polymethylmethacrylate polymer to about 50/50 wt %.

Claim 30 (currently amended): Toner particles comprising at least one surface treatment agent present on the surface of said toner particles and a polyethylene wax or a cross-linked styrene acrylate polymer, and said toner particles having a charge rate such that the 2'/10' MECCA charge ratio is from about 0.9 to about 1.1, and having a 2 minute charge level of from about -20 to about -

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30 μ C/g. wherein said toner particles have at least one surface treatment agent present on the surface of said toner particles, and wherein said toner particles include a polyethylene wax or a cross-linked styrene acrylate polymer.

Claim 31 (currently amended): Toner particles comprising at least one toner resin, at least one a single charge control agent, at least one surface treatment agent, and optionally at least one release agent or colorant or both, wherein inorganic particles are present in said toner resin and said surface treatment agent is present on the surface of said toner particles, wherein said inorganic particles are colloidal silica particles that are not in a charged state and are present in an amount of from about 0.1 weight % to about 0.5 weight %, based on the weight of the toner particles, and wherein said toner particles having a charge rate such that the 2'/10' MECCA charge ratio is from about 0.9 to about 1.1.

Claim 32 (currently amended): Toner particles comprising at least one toner resin, at least one a single charge control agent, at least one surface treatment agent, and optionally at least one release agent or colorant or both, wherein inorganic particles are present in said toner resin and said surface treatment agent is present on the surface of said toner particles, wherein said toner resin comprises a cross-linked styrene acrylate copolymer, said charge control agent ~~comprises~~ is an organo iron complex charge agent, said surface treatment agent comprises silica, and said inorganic particles comprise silica, and wherein the toner particles having a charge rate such that the 2'/10' MECCA charge ratio is from about 0.9 to about 1.1.

Claim 33 (previously presented): The toner particles of claim 40, wherein said toner resin comprises from about 80 wt% to about 95 wt% cross-linked styrene acrylate copolymer, said charge control agent comprises from about 1 wt% to about 2.5 wt% of organo iron complex charge agent, said surface treatment agent comprises from about 0.05 wt% to about 5.0 wt% of silica, and said

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inorganic particles comprise from about 0.1 wt% to about 0.5 wt% silica, based on the weight of the toner particles.

Claim 34 (cancelled)

Claim 35 (original): A developer comprising the toner particles of claim 30 and magnetic carrier particles.

Claim 36 (original): A developer comprising the toner particles of claim 31 and magnetic carrier particles.

Claim 37 (original): A developer comprising the toner particles of claim 32 and magnetic carrier particles.

Claim 38 (original): A developer comprising the toner particles of claim 33 and magnetic carrier particles.

Claim 39 (previously presented): A developer comprising the toner particles of claim 5 and magnetic carrier particles.

Claim 40 (currently amended): Toner particles comprising at least one toner resin, at least one charge control agent, at least one surface treatment agent, and optionally at least one release agent or colorant or both, wherein inorganic particles are present in said toner resin and said surface treatment agent is present on the surface of said toner particles, wherein said toner resin comprises a cross-linked styrene acrylate copolymer, said charge control agent comprises an organo iron complex charge agent, said surface treatment agent comprises silica, and said inorganic particles comprise silica, and wherein the toner particles having a charge rate such that the 2'/10' MECCA charge ratio is from about 0.9 to about 1.1, and having a 2 minute charge level of from about -20 to about -30 μ C/g.

Claim 41 (previously presented): A developer comprising the toner particles of claim 40

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and magnetic carrier particles.

Claims 42 and 43 (cancelled)

Claim 44 (new): Toner particles comprising at least one surface treatment agent present on the surface of said toner particles, and a single charge control agent and wherein said toner particles include a polyethylene wax or a cross-linked styrene acrylate polymer, said toner particles having a charge rate such that the 2'/10' MECCA charge ratio is from about 0.9 to about 1.1.

Claim 45 (new): The toner particles of claim 31, wherein said charge control agent is a negative charge control agent.

Claim 46 (new): Toner particles comprising at least one toner resin, at least one charge control agent, at least one surface treatment agent, and optionally at least one release agent or colorant or both, wherein inorganic particles are present in said toner resin and said surface treatment agent is present on the surface of said toner particles, wherein said inorganic particles are colloidal silica particles that are not in a charged state and are present in an amount of from about 0.1 weight % to about 0.5 weight %, based on the weight of the toner particles, and wherein said toner particles having a charge rate such that the 2'/10' MECCA charge ratio is from about 0.9 to about 1.1, and having a 2 minute charge level of from about -20 to about -30 $\mu\text{C/g}$.